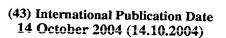
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(54) Title: METHOD AND SYSTEM IN A HEAT EXCHANGE SYSTEM AND METHODS FOR AIR/FUEL CONTROL AND FOR SOOT CLEANING OPTIMIZATION

Exhaust gas steam is led by a heat exchange surface of the heat exchange system A certain part of the heat exchange surface of the heat exchange system is cleaned with a cleaning equipment having an operation parameter status Particles are released from the heat exchange surface The released particles are led into the exhaust gas stream of the heat exchange system Amount and/or type of the released particles in the exhaust gas stream is/are sured and particle measurement data of these particles is created on the basis of these measurements Information of the fouling is created in an electronic memory by linking together and storing in the electronic memory coordinates of the part of the heat exchange surface of the heat exchange system being cleaned and the measurement data created during the cleaning of said part. The information of the fouling is processed as a function of the heat exchange surface coordinates to find an optimal time of cleaning for and/or optimal operation parameters for the cleaning equipment for a particular part of the heat exchange surface of the heat exchange system.

(57) Abstract: Means for obtaining accurate knowledge of location and amount of fouling inside a heat exchange system, such as a boiler of a power plant, are provided. According to the invention this knowledge can be used to optimize cleaning of a heat exchange system. The system of the invention comprises: Means for measuring particles in the exhaust gas stream of the heat exchange system. These particles are at least partly released when cleaning a certain part of the heat exchange surface of the heat exchange system. Means for creating information of the fouling in an electronic memory by linking together coordinates of the part of the heat exchange surface being cleaned and the measurement data created during the cleaning of said part.

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